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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,596	12/06/2000	Margaret S. Fyfield	00-103	9586
24319	7590	04/20/2004	EXAMINER	
LSI LOGIC CORPORATION 1621 BARBER LANE MS: D-106 LEGAL MILPITAS, CA 95035			HUYNH, YENNHU B	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/731,596

Applicant(s)

FYFIELD, MARGARET S.

Examiner

Yennhu B. Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/9/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This Office Action is in response to the Election filed on 1/20/04.

#### ***Election/Restrictions***

Applicant's election without traverse of claims 1-15 in Paper filed on 1/20/04 is acknowledged.

Claims 16-20 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claims, there being no allowable generic or linking claim. Election was made without traverse in Paper filed on 1/20/04.

#### ***Information Disclosure Statement***

The information disclosure statement is being considered by the examiner.

#### ***Oath/Declaration***

Oath/Declaration filed on 12/6/00 is accepted.

#### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method For Probing A Semiconductor Wafer.

#### ***Claim Rejections - 35 USC § 102***

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8-12, 14 & 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hideki (JP 2001083208).

Hideki disclose probe for analyzing semiconductor chip having front side on which an IC is formed, and a rear side opposite to the front side, which include:

-Re. claim 1: placing wafer 12 onto a probe fixture 10; wherein the front side of the wafer is initially facing up (fig. 13 and related text); extending a probe tip 6 into contact with a contact point of the IC 4 (fig. 3a) or semiconductor wafer 13 (fig. 13) while the wafer is retained in the probe fixture; and optical examining the IC while the wafer is retained in the probe by the optical system 11 (Abstract, [0002, 0003]).

-Re. claims 2 & 4: turning over the probe fixture while each probe tip 6 extends into contact with a contact point of the IC to cause the rear side of the wafer to face upward, and viewing the back side of the wafer while optically examining the IC by the optical system 11 (fig.2), and retain the wafer in a recess of the probe fixture initially and after turning over the probe fixture (fig. 14, [0005]).

-Re. claim 3: electrically input probe to supply power /signal to the probe 6 before turning the probe fixture over (page 1, [0003]).

-Re. claim 5: applying one of reduced pressure or vacuum to wafer to retain the wafer in the recess or its position ([0036]).

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-Re. claim 8: supporting the entire probe 10 above the wafer 12 when the probe tip 6 extends into contact with the IC surface 4 (fig. 3a and 13).

-Re. claim 9: connecting the probe 6 to a probe adjustment 24a, 24b device, and supporting the position adjustment device above the wafer 12 (fig.13, 15, [0002, 0006]).

-Re. claims 10 -12: adjusting the position of the probe tip 6 on the contact surface of the IC 4 (fig. 3` a) or IC 13 (fig.13) by manipulating (manipulator 5) the position adjustment device while the position adjustment device is supported above the wafer 12; extending a rail across and above the wafer retained in the probe fixture, and supporting the entire probe from the rail above the wafer; adjusting the position of the probe tip relative to the wafer by moving the entire probe along the trail (fig.13 [002]).

-Re. claim 14: optically examining the IC on the wafer using a photoemission detection microscope 14 (fig.13 [0002, 0003]).

-Re. claim 15: placing the probe fixture a platen 15 of a test station and retain the probe fixture to the platen (fig. 15, [0006]).

### ***Allowable Subject Matter***

Claims 6, 7 & 13 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: Prior art do not disclose or suggest the retaining peripheral edges of the wafer on a supporting surface, and applying the one of the reduced pressure or vacuum to the peripheral

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edges of the wafer through holes in supporting surface (cl.6); communicating the vacuum through the probe fixture to the holes in the supporting surface (cl.7); and connecting a pair or second parallel rails to the probe fixture to extend on opposite sides of the recess and generally transverse to the rail first aforesaid; movably connecting the first rail to the pair of the second rails; and moving the first rail along the pair of second rails to position the entire probe above the wafer (cl.13).

The above limitations for claims 6,7 & 13 are neither anticipated nor rendered obvious over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yennhu B Huynh whose telephone number is 571-272-1692. The examiner can normally be reached on 8.30AM-7.00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached on 571-272-1702. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-7724.

YNBH,  
041304



CARL WHITEHEAD, JR.  
SUPERVISORY PATENT EXAMINER  
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